

# Nitrogen Loading in the Upper Mississippi River

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## Abstract

Daily water samples have been collected since February 1992 immediately below the pool 19 dam at Hamilton, Illinois. The frozen samples were analyzed for orthophosphate, dissolved silicon, nitrate plus nitrite, nitrite and ammonium using standard methods (Whitledge et al, 1986) on a Technicon AutoAnalyzer II segmented flow analyzer. Water samples were filtered for *chlorophyll a* determinations starting in February 1993 to provide estimates of phytoplankton biomass and "potential phytoplankton production."

A strong annual cycle of dissolved nitrogen was observed over the three year period ranging from near depletion in the summer to greater than 370  $\mu\text{mole/liter}$  during the winter. The rapid changes in ambient concentrations of dissolved inorganic nitrogen over short time periods implies that local events can induce relatively large changes.

No Manuscript Submitted.

## Presentation Discussion

Mr. Whitledge's presentation was canceled.